



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/674,667

09/30/2003

Francis M. Creighton IV

5236-000440

5015

28997 7590 02/05/2008
HARNES, DICKEY, & PIERCE, P.L.C
7700 BONHOMME, STE 400
ST. LOUIS, MO 63105

EXAMINER

RAMIREZ, JOHN FERNANDO

ART UNIT

PAPER NUMBER

3737

MAIL DATE

DELIVERY MODE

02/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED
FEB 05 2008
GROUP 3700

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/674,667
Filing Date: September 30, 2003
Appellant(s): CREIGHTON ET AL.

Kevin M. Pumm
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 25, 2007 appealing from the Office action mailed April 19, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

Claims 39, 41, 45-47 and 51-52 are rejected under 35 U.S.C. 112 second paragraph.

Claims 39, 41 and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Holcomb (US 6,042,531).

Claims 40 and 51-52 have been rejected under 35 U.S.C. 103(a) rejection over Holcomb (U.S. Pat. No. 6,042,531) in view of Holcomb (U.S. Pat. No. 5,312,321).

NEW GROUND(S) OF REJECTION

Claims 39-41 and 45-47 and 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Leupold (US 5,216,400).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,042,531	Holcomb	03-2000
5,312,321	Holcomb	05-1994
5216400	Leupold	06-1993

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 39 and 41 recites the limitation "the same selected operating point" in the last two lines of the claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 45-47, and 51-52, the phrase "an at least approximately curve" renders the claim indefinite because it is unclear whether the limitation(s) following the

phrase are part of the claimed invention. See MPEP § 2173.05(d). (see also Ex parte Eastwood, 163 USPQ 316 (PTO Bd. App. 1968)).

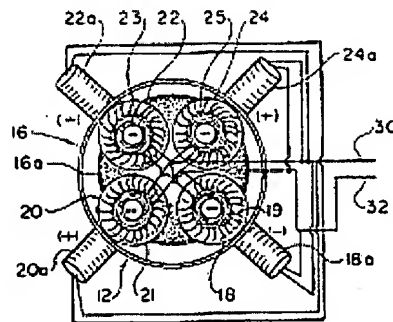
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

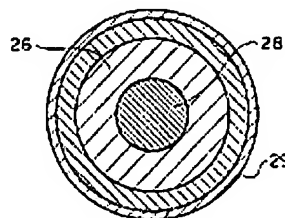
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 39, 41 and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Holcomb (US 6,042,531).



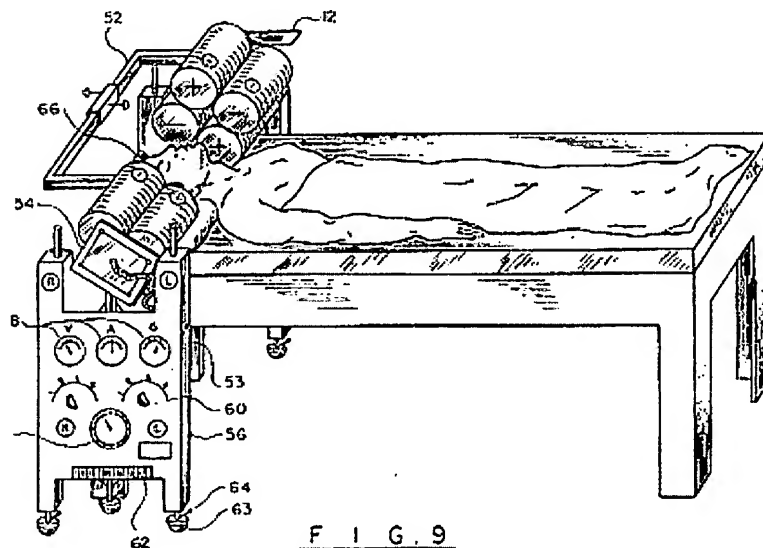
F I G . 2



F I G . 3

Holcomb discloses a magnet having a front and a back face and comprising a plurality of segments (see Figs. 9,11), the segments each magnetized to provide

substantially the maximum magnetic field in a selected direction at an operating point spaced from the front face, the back face being substantially contoured to follows a surface of constant contribution to magnetic field in the selected direction at the operating point (abstract, column 15, lines 5-67, Figs. 2 and 3).



With respect to claims 45-47, Holcomb '531 shows as described above a magnet for applying magnetic field in a selected direction at a selected operating point (abstract), the magnet comprising a front face generally facing the operating point, and a back face facing away from the operating point, the back face generally conforming to a constant contribution surface of the magnetic field in the selected direction, and wherein the magnet is divided into a plurality of segments (figure 2, elements 22,24,20,18) segment comprises a front face, generally facing the operating point, the back face generally facing away from the operating point, the back face generally

conforming to a constant contribution surface of the magnetic field in the selected direction (see Figures 9, 11 and related description).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holcomb (US 6,042,531) in view of Holcomb (US 5,312,321).

Holcomb '531, teaches all the limitations of the claimed subject matter except for mentioning specifically that each segment of the magnet is magnetized in the direction of magnetization that, at the center of mass of the segment, provides the maximum contribution to the magnetic field in the selected direction at the selected operating point.

However, a magnet in which each segment is magnetized in the direction of magnetization that, at the center of mass of the segment, provides the maximum contribution to the magnetic field in the selected direction at the selected operating point is considered conventional in the art as evidenced by the teachings of Holcomb (US 5,312,321).

The Holcomb '321 patent teaches a magnet in which each segment is magnetized in the direction of magnetization that, at the center of mass of the segment,

provides the maximum contribution to the magnetic field in the selected direction at the selected operating point. (see figures 2, 3 and 5, column 3, lines 42-68 and column 4, lines 1-26).

Based on the above observations, for a person of ordinary skill in the art, modifying the method disclosed by Holcomb'531, with the above discussed enhancements would have been considered obvious because such modifications would provide that the magnetic field and its gradient is concentrated on the central axis of each magnet rather than being distributed uniformly over the face of the magnet, so that the device will perform properly, such magnetic field distribution has a significant factor in the effectiveness of the magnetic device.

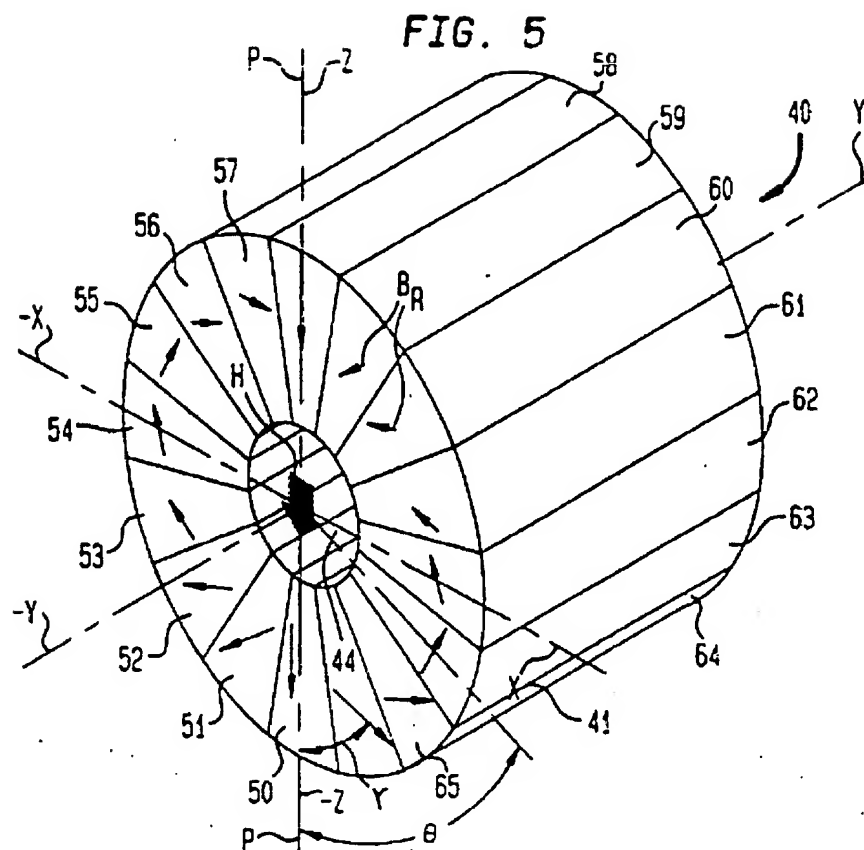
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 39-41 and 45-47 and 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Leupold (US 5,216,400).



Leupold discloses a permanent magnet having a plurality of segments (see abstract, figs. 2 and 5), which are uniformly magnetized to provide substantially the maximum magnetic field in a selected direction at an operating point spaced from the front face (col. 2 line 66 - col. 3 line 11), the back face being substantially contoured to follow a surface of constant contribution to magnetic field in the selected direction at the operating point (col. 5 line 59 – col. 6 line 17, see fig. 5).

With respect to claims 45-47, shows as described above a magnet for applying magnetic field in a selected direction at a selected operating point (col. 2 line 66 - col. 3 line 11), the magnet comprising a front face generally facing the operating point (see fig.

5, inner surface), and an at least approximately curved back face facing away from the operating point (see fig. 5, outer surface), the back face generally conforming to a constant contribution surface of the magnetic field in the selected direction (col. 5 line 59 – col. 6 line 17), wherein the magnet is divided into a plurality of segments (fig. 5, elements 57-65), wherein each segment comprises a front face generally facing the operating point (see fig. 5, inner surface), the back face generally facing away from the operating point (see fig. 5, outer surface), the back face generally conforming to a constant contribution surface of the magnetic field in the selected direction (col. 5 line 59 – col. 6 line 17, see fig. 5).

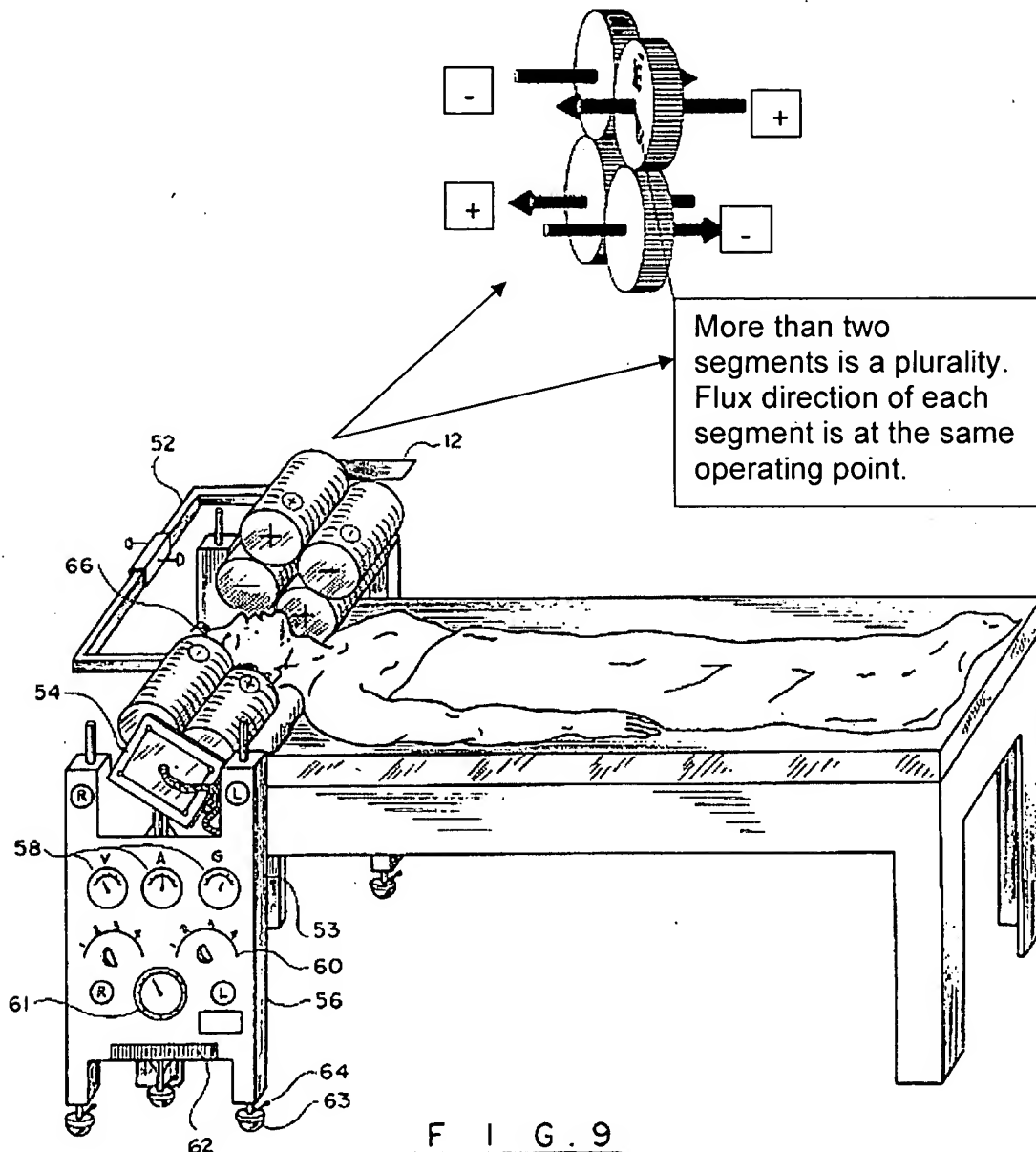
With respect to claims 40, 51 and 52, Leupold discloses that each segment is uniformly magnetized in the direction of magnetization, where the direction provides the maximum contribution to the magnetic field in the selected direction as shown in figures 1 and 5 (see also col. 4 lines 14-30, col. 5 line 51 – col. 6 line 48).

(10) Response to Argument

Applicant's arguments have been fully considered, but are deemed not persuasive.

In relation to independent claims 39, 41 and 45, the Holcomb'531 patent teaches a compound magnet comprising a plurality of segments, where each segment is magnetized to provide a magnetic field in a selected direction at the same operating point spaced from the front face of the magnet. (see figures 4, 5 and 9, abstract, see column 15, lines 5-67).

Note: see column 52 lines 13-36, where the compound magnet is taken as a whole , and the following figures to explain that the direction of the magnetic field of the plurality of segments is at the "same" operating point.

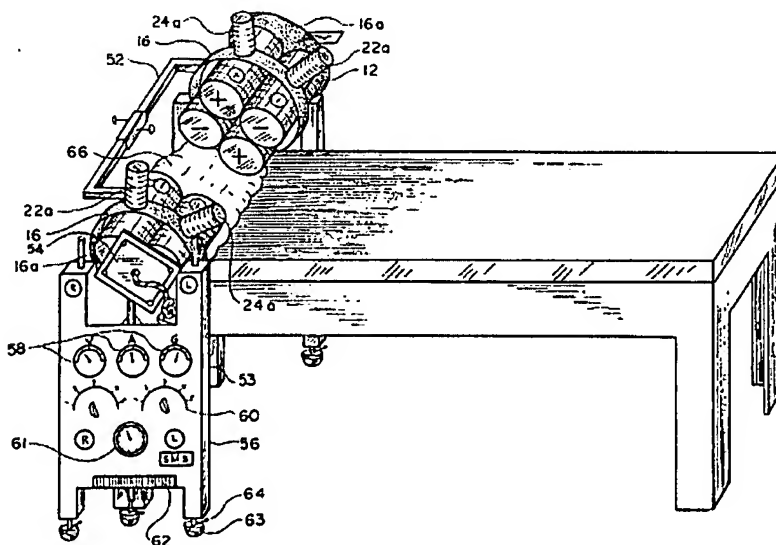


In relation to independent claim 45, the Holcomb'531 patent teaches the magnet has "an at least approximately curved back face facing away from the operating point, the back face generally conforming to a constant contribution surface of the magnetic field in the selected direction". (see element 16a in figures 1, 2 and 11).

The specifications of the Holcomb'531 patent in column 52, lines 19-22 specifically states:

20 pole. A flux return ring may be attached to the bottom of the described 4 electromagnetic heads, this ring enhances the flux field and controls unwanted stray electrical flux from the opposite pole. A flux focusing ring may be positioned

Note: In paragraph [0075] of applicant's specifications, applicant explains the criticality of this limitation as "A reason for shaping the back face 504 in accordance with the constant contribution surface is that this is the most weight and volume efficient way to maximize the magnetic field F at the operating point".



The specifications of the Holcomb'531 patent in column 31, lines 37-55 specifically states:

nology. Flux return ring 16a is attached to the bottom of the described 4 electromagnetic heads, this ring enhances the flux field and controls unwanted stray induction currents as well as stray flux from the opposite pole. A flux focusing ring 40 16 is positioned around the flux heads adjacent to the insulated wire coils, it being about 2.5 inches wide (6.35 cm) and ¼ to ½ inches (6.35 mm–12.7 mm) thick. Attachment means hold the focusing ring in proper location for maximum benefit. Attached to the flux focusing ring are focusing 45 coils 18a, 20a, 22a and 24a. These focusing coils are attached to the flux focusing ring in proximity to a head of like charge and at a 45° to 90° angle to the long axis of the primary flux pole. In this position, the flux focusing coils along with the focusing ring, the flux return ring and the new 50 iron core of this invention make the gradient steeper, increase the field strength and decrease heating and stray high currents. The flux return ring and the flux focusing ring are grounded to reduce stray induction currents and the variables that they add to the therapeutic magnetic field. 55

Note: The Flux return ring 16a reduces stray induction and is made of a ferroconductor (see col. 35, lines 50-52). A ferromagnetic material becomes magnetized in the direction of any applied magnetic field to produce a stable high magnetic field.

In relation to claims 40 and 51-52, applicant alleges on page 11 of the appeal brief dated September 25, 2007, that the Holcomb'321 patent does not states a number of segments of uniform magnetization.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a number of segments of uniform magnetization.) are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Additionally, applicant alleges that the Holcomb do not give any reason why a person of ordinary skill considering Holcomb's center-charged magnet body would find it "**Obvious to try**" magnetizing individual segments in a direction so that each segment provides a field in the same select direction.

In response to applicant's argument, the disclosures in a reference must be evaluated for what they would fairly teach one of ordinary skill in the art. *In re Snow*, 471 F.2d 1400, 176 USPQ 328 (CCPA 1973); *In re Boe*, 355 F.2d 961, 148 USPQ 507 (CCPA 1966). Specifically, in considering the teachings of a reference, it is proper to take into account not only the specific teachings of the reference, but also the inferences that one skilled in the art would reasonably have been expected to draw from the reference. *In re Preda*, 401 F.2d 825, 159 USPQ 342 (CCPA 1968); *In re Shepard*, 319 F. 2d 194, 138 USPQ 148 (CCPA 1963). In addition, it is proper to take into consideration not only the teachings of the prior art, but also the level of ordinary skill in the art. *In re Luck*, 476 F.2d 660, 177 USPQ 523 (CCPA 1973). Specifically, those of ordinary skill in the art are presumed to have some knowledge of the art apart from what is expressly disclosed in the references. *In re Jacoby*, 309 F.2d 513, 135 USPQ 317 (CCPA 1962).

For the above reasons, it is believed that the rejections should be sustained.

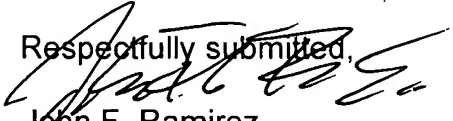
Application/Control Number:
10/674,667
Art Unit: 3737

Page 14

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the
Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

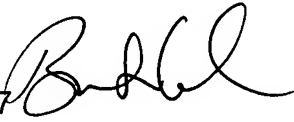

John F. Ramirez
Patent Examiner
Art Unit 3737

January 29, 2008

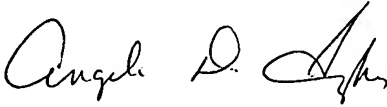
Conferees:


Mr. Frederick Schmidt
Group Director TC 3700

Mr. Brian Casler
SPE Art Unit 3737


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

Mrs. Angela Sykes
SPE Art Unit 3762


ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

Kevin M. Pumm
7700 Bonhomme Avenue, Suite 400
St. Louis, MO 63105